

**Notice of Allowability**

Application No.

09/702,202

Applicant(s)

KORGER, PETER

Examiner

Shane M Thomas

Art Unit

2186

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Interview Summary dated 12/1/2004.
2. ☒ The allowed claim(s) is/are 1,2,5-10,12-16 and 18-20.
3. ☒ The drawings filed on 18 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 12/2/2004.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kevin Daffer on 12/01/2004.

The application has been amended as follows:

Claim 1 has been amended to read:

1. A system for indicating status of a storage device, comprising:

$N$  storage locations, each location having  $T$  tag bits;

A  $N$ -bit read register and a  $N$ -bit write register, each of which are in communication with the respective corresponding  $N$  storage locations; and

[[a]] an exclusive-OR (XOR) logic gate associated with each of the  $N$  storage locations, such that the  $i^{\text{th}}$  logic gate compares the  $i^{\text{th}}$  bit in the write register with the  $i^{\text{th}}$  bit in the read register to determine which of the  $N$  storage locations have been written to in lieu of being read from, and the status of such  $N$  storage locations dependent on whether the respective  $T$  tag bits are active.

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The following is an examiner's statement of **reasons for allowance**: the prior art of record does not specifically teach nor suggest each of the detailed limitations of Applicant's independent claims 1, 10 and 16, as reflected by the Examiner's Amendment contained herein.

Applicant's arguments, see pages 3-6, filed 10/14/2004, with respect to claims 1, 10, and 16, have been fully considered and are persuasive in light of the Applicant's approved Examiner's amendment. The rejections of claims 1,2,5-10,12-16, and 18-20 have been withdrawn.

As per claims 1, 10, and 16, the prior art of record does not teach the *structure* as claimed by Applicant. Applicant's limitations claim utilizing both a read register and a write register, where each respective entry of the registers are connected via an XOR gate in order to distinguish whether the respective entry has been written to but not yet read from. The prior art reference of Terakago (Japanese Patent No. JP410112178A, Publication No. 10-112178) teaches using a read register and a write register as shown in figure 3; however, Terakago, does not utilize the read and write bits of the registers to determine which locations of the storage device have been written to and not read from. Rather, the registers are used as pointers to determine where the respective storage entries the read and write pointers are currently accessing (abstract). The prior art references of Murphy (U.S. Patent No. 6,433,787), Klingelhofer (U.S. Patent No. 5,884,099), and Zaidi (U.S. Patent No. 6,574,689) each show utilizing only a single register to determine if an entry of a storage entity is valid (written to but not yet read from), while Applicant claims in claims 1, 10, and 16, both a read and write register each having the same number of entries as storage locations. In addition, none of the prior art of record specifically

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teaches utilizing the results of the read register and write register in combination with a set of tag bits for each entry.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane M Thomas whose telephone number is (571) 272-4188. The examiner can normally be reached on M-F 8:30 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt M Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shane M. Thomas



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